PATENT

IN THE SPECIFICATION

Please replace the paragraph that includes line 17 of page 4 with the following paragraph, shown here with underlining to indicate added text in accordance with 37 C.F.R. section 1.121:

For clarity of describing the proposed method of invention, a simple achromatic lens for focusing and collimating the optical paths between grating and scanner mirror has been selected. For most of the spectrum covered in this invention, the lens requires special design. In fact, it is a quasi optics lens. As the frequency of electromagnetic radiation (microwave, terahertz, photonics including IR), is selected the material of the lens can be chosen and the lens can be processed in a kinoform shape with high efficiency as described in copending U.S. Patent Application Serial No. 10/746,440, entitled "Efficient optics for terahertz imaging and sensing". The lens with kinoform shape, makes the presently disclosed scanning optical delay line highly efficient in diffractive optical processing and inherently supports an improvement in signal to noise ratio.

Please replace the last paragraph of p. 4 with the following paragraph, shown here with strikethrough to indicate deleted text in accordance with 37 C.F.R. section 1.121:

Figure 1 shows a schematic diagram demonstrating a rapid scanning optical delay line using a presently available and patented MOEMS optical scanner ~~[3]~~. Optical delay line is a key component in time domain imaging (TDI). The reference beam 1 of time domain imaging is entering in our invention device, MOEMS rapid scanning optical delay line (MRSOD), as an incident beam and strikes grating 2 at the point 3 at a predetermined angle and is diffracted in the direction 4. The figure depicts the case of using a grating with a blaze selected to enhance the optical efficiency (i.e., the -1 order). The grating is designed for electromagnetic frequencies of operation. The structure of this grating such as physical dimension in mm and critical dimension (CD) in line/mm are selected based on the requirement of the time delay. Considering that the wavelength l of incident waves is known, the angle of incident is selected to force the beam 4 to have the maximum diffracted power in "-1 order". The diffracted beam 4 is incident on a lens 5, of focal length F placed at a distance F from the grating. The lens 5 can be a simple achromatic lens or a quasi optics focusing and collimating

system based on electro magnetic domain of operation. The lens 5 focuses the diffracted beam on the scanner mirror 6 of MOEMS scanner 7 placed at a distance F from the lens 5. This focused beam, arrives at MOEMS scanner perpendicular to the scanner mirror surface at scan angle = zero.